

PATENT CLAIMS

1. A device for obtaining circulation of a fluid comprising a shaft (2) and provided thereto a plurality of fan bodies (3) that rotate in a cavity having inlet and outlet openings for the fluid flow,
5 c h a r a c t e r i s e d i n that the fan bodies (3) in their basic form are substantially disc-shaped bodies that extend in a substantially radial direction and where the shaft (2) runs through the centre of the fan bodies and the cavity is substantially cylindrical and comprises at least two openings (16, 16') for intake/discharge of the fluid that is to circulate.
- 10 2. A device according to claim 1, c h a r a c t e r i s e d i n that the length of the shaft (2) and the number of fan bodies (3) can be varied depending upon the site of use of the device.
3. A device according to claim 1 or 2, c h a r a c t e r i s e d i n that the fan bodies (3) in their basic form are
15 substantially rotational-symmetrical about their centre, are arranged essentially at right angles to the shaft (2) and with a distance between the fan bodies (3).
4. A device according to claims 1-3, c h a r a c t e r i s e d i n that the fan bodies (3) on or in their substantially radially extending faces have flow elements (8) that promote better air circulation.
- 20 5. A device according to claim 4, c h a r a c t e r i s e d i n that the flow elements (8) consist of at least one projection in the radial faces of the fan body.
6. A device according to claim 5, c h a r a c t e r i s e d i n that the flow elements (8) consist of projections on
25 both substantially radially extending faces of the fan body.
7. A device according to claim 5 or 6, c h a r a c t e r i s e d i n that the projection(s) (8) run from a radius r_1 to a radius r_2 , wherein $r_1 < r_2$, and r_2 is substantially equal to an outer point of the fan body.
- 30 8. A device according to claim 7, c h a r a c t e r i s e d i n that the projection(s) (8) run along a line of curvature that is curved forwards relative to the direction of rotation at an angle essentially equal to 90 degrees relative to a rotational tangent at r_1 , and an angle of 50 degrees relative to a rotational tangent at r_2 .

9. A device according to claim 4,
characterised in that the flow elements (8) may be made straight and
radial or straight and at an angle or curved and radial, forward or backward curved
relative to the direction of rotation.
- 5 10. A device according to one of claims 1-9,
characterised in that the substantially tubular cavity, wherein the
shaft rotates is defined by a cover (15) with inlet and outlet openings (16, 16').
11. A device according to one of claims 1-9,
characterised in that the tubular cavity, in which the shaft rotates, is
10 formed as an integral part of the structure in which the fan device is to be mounted.
12. A method for mounting the device according to claim 1,
characterised in that the shaft (2) is cut to the desired length for the
use in question, the number of fan bodies (3) with the desired surface is determined
and introduced onto the shaft (2) with optional intermediate spacers (7) and
15 secured to the shaft (2), or that a one-piece shaft (2) with fan bodies (3) is
produced in lengths and cut to the right length according to need, whereupon the
shaft with fan bodies is arranged in the cavity.
13. A use of the device according to claims 1-11, at locations where it is
desirable to have a uniform warm or cold air curtain that is obtained by circulation
20 of air, for example, refrigerated and freezer counters, containers and/or cabinets.